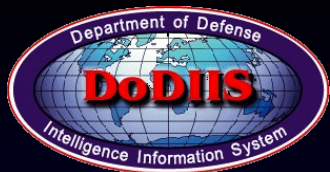


DoDIIS Certification Process

Presented by
Kevin Odom,
AFC2ISRC/INYA
AFSCO

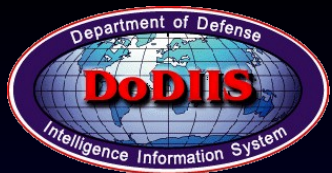
UNCLASSIFIED



Overview



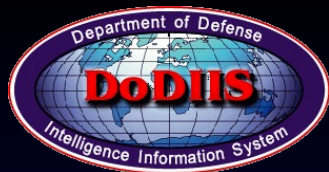
- **History of the DoDIIS Certification Process**
- **The DoDIIS Executive Agent for Test & Evaluation (DExA for T & E)**
- **Our Customers & Partners**
- **The Process**
- **Testing Metrics - DoDIIS Compliant Programs**
- **Your Role in the Process**
- **Learning More**



History of the DoDIIS Certification Process



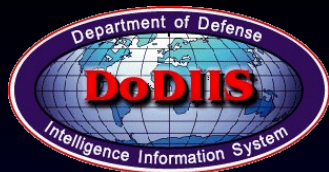
- **DExA for T&E Certification**
 - In early 1995, the Unified Commands requested the DR, DIA provide relief from the frequent fielding of substandard, destructive intelligence software
 - In June 1995, the 497th IG was appointed by the DMB as the DExA for oversight of T & E in support of the DoDIIS Certification Process
 - In July 1995, the DR/DIA directed creation of the DoDIIS Life Cycle Management Office for oversight of DoD 5000 series compliance and management and enforcement of the DoDIIS Certification Process



History of the DoDIIS Certification Process (cont)



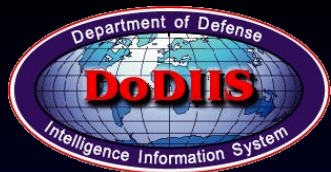
- **DExA for T&E Certification**
 - In 2001, 497th mission was transferred to AFC2ISRC
- **T&E Purpose of Existence:**
 - Assess how well an application conforms to standards and operating requirements
 - Mitigate the risk of fielding defective applications
- **Our testing results and recommendations are crucial to the DMB's decision to issue a Certificate to Field for IMAs**



History of the DoDIIS Certification Process (cont)



- **Governing Directives**
 - **DoDIIS Instructions 2000**
 - **DoDIIS Test & Evaluation Policy Document (DoDIIS Test & Evaluation Master Plan)**
 - **DoDIIS Integration and Requirements Evaluation Procedures**
 - **Interoperability Directives (CJCSI 3170.01A & CJCSI 6212.01B)**
 - **DoDIIS Certification and Accreditation Guide, 2001**
 - **Test Process Oversight Committee (TPOC) Charter**



History of the DoDIIS Certification Process (cont)



- **Testing Certification Process to Present**
 - **The DoDIIS Test Process has been in place since 1996**
 - **Initially, the only programs participating did so voluntarily**
 - **No oversight or enforcement functions were active**
 - **As a result, sites continued to be inundated with substandard software**
 - **In March 1999, the LCM office was re-energized**
 - **The DExA for T & E, DoDIIS SIMO/LCM, JITF, JITC work very closely with the Services, Unified Commands, Intelligence Agencies and community Program Managers to continue to improve our processes**



History of the DoDIIS Certification Process (cont)



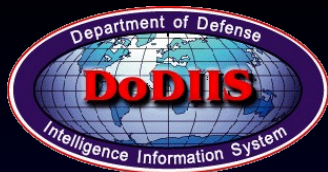
- **Current State of DoDIIS Testing**
 - The process includes independent installation, integration, infrastructure compliance, interoperability, security and operational site acceptance testing
 - The process has tested over 185 releases of different software applications including
 - Imagery and message databases
 - Communications processors and handlers
 - Collaborative, web-based and enterprise applications
- By the end of FY03, an estimated 39 intelligence mission applications will be officially certified under the DoDIIS Certification Process.



History of the DoDIIS Certification Process (cont)



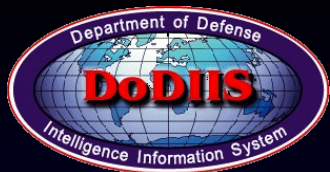
- **DoDIIS Testing & Certification is an important and proven process that has successfully mitigated the risk of fielding defective software to the DoDIIS Community since 1996**
- **Good software is a force multiplier for intelligence analysts**
- **The DoDIIS certification process is meant to ensure that only quality software makes it to the intelligence warfighter**
- **The Test & Evaluation Branch oversees the test and evaluation portion of the certification process to mitigate the risk of fielding defective software**



DExA for T&E Mission



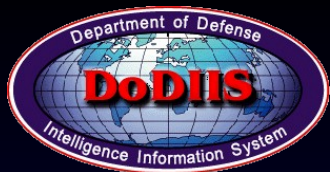
- **Provide oversight and management of the test preparation, scheduling, testing and reporting process
(40 programs/year)**
- **Develop test and evaluation policy based on current DoDIIS Instructions**
- **Drafter & primary advocate for test process budget (primarily from GDIP funds)**
- **Plan/coordinate/schedule/host Joint Test Planning Meetings**
 - **JTPM coordination with NIMA ITF**
- **Coordinate and Chair semi-annual Test Process Oversight Committee (TPOC) conference**



DExA for T & E



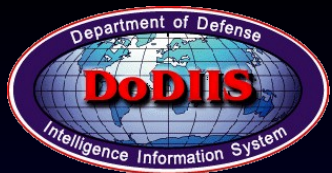
- **What kind of testing?**
 - **Installation:** Can the IMA be installed by the site user given the documentation?
 - **Infrastructure:** Does the IMA work correctly with all the proper operating systems and DoDIIS infrastructure software?
 - **Integration:** Does the IMA peacefully co-exist with the other IMAs on the system
 - **Interoperability:** Does the IMA pass and receive data precisely and accurately with other IMAs?
 - **Security:** Is the IMA configured in accordance with Defense Intelligence Community Directive requirements?
 - **Site Acceptance Testing:** Can the IMA be installed and operated in a real world environment?



DExA for T & E (cont)



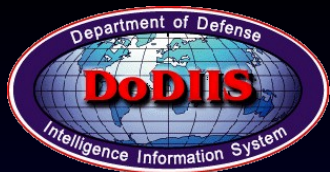
- **Which software needs DoDIIS Certification?**
 - **Any system that wishes to be used operationally at more than one DoDIIS site**
 - **Software applications funded by the General Defense Intelligence Program (GDIP) or exchanging intelligence information with GDIP software (regardless of funding) or TIARA program**
 - **Software applications using the Joint Worldwide Intelligence Communications System (JWICS) or accredited at the SCI level**
 - **Software applications which are not site specific**
 - **Examples: Broadsword, JTT, Pathfinder, JIVA, DE, IPL, IRP, CSP, GALE, MIDB, MDITDS, JDISS, CMMA**



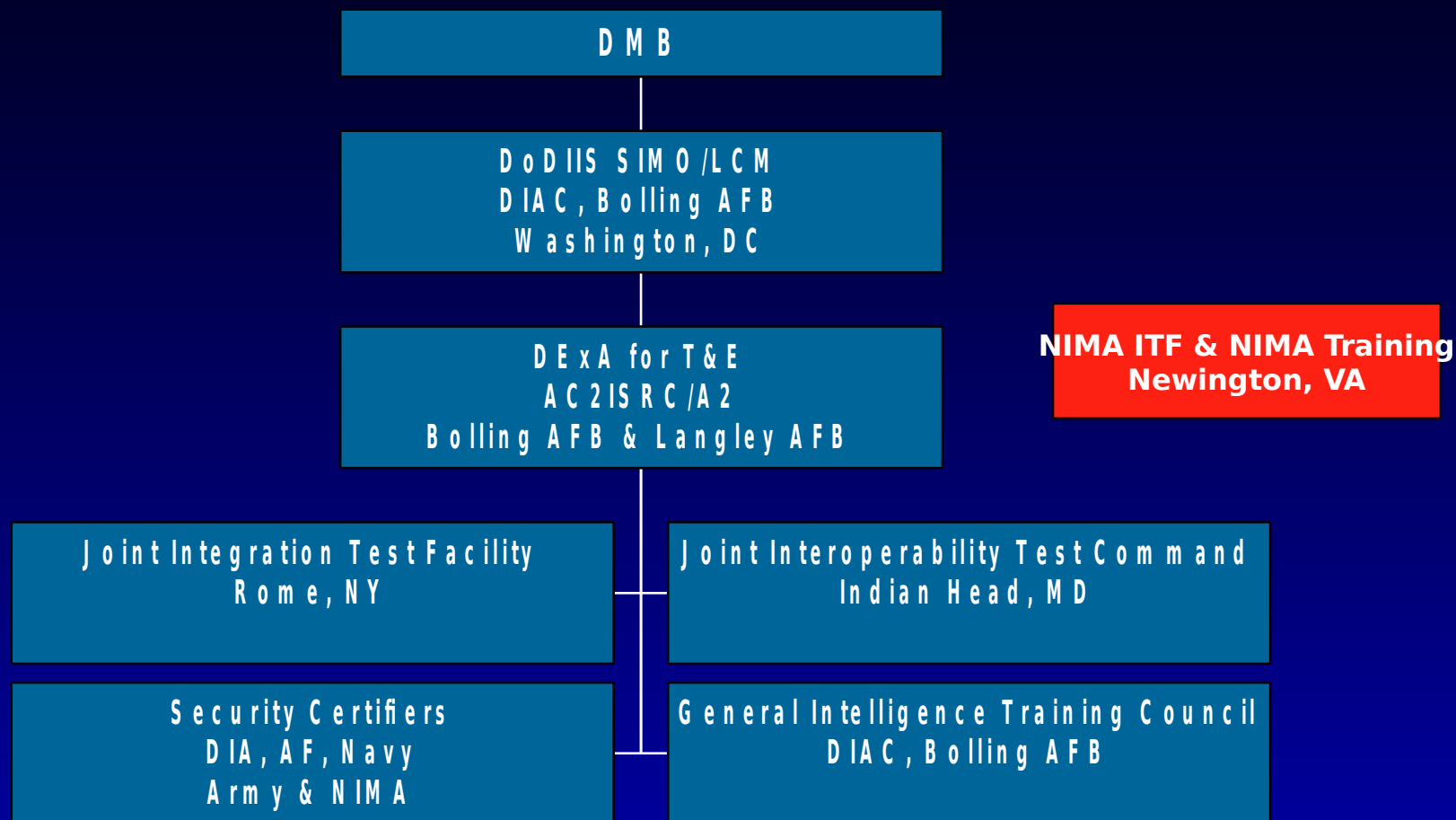
Our Customers & Partners



- **Who are our customers?**
 - **Unified Commands and other Intelligence Community users who install and use programs at their sites**
 - **Program Managers who develop and field DoDIIS Intelligence Mission Applications, IT components & infrastructure software**
- **Who are our partners?**
 - **Testing Organizations under direction of the DMB and the DoDIIS SIMO**
 - **Specifically, the Joint Integration Test Facility (JITF), Joint Interoperability Test Command (JITC), Information Security Certifiers (Services & Agencies), Training plan Certifiers (GITC & NIMA), and Operational DoDIIS Testing Sites (Beta II Sites)**



Key DoDIIS Certification Organizations

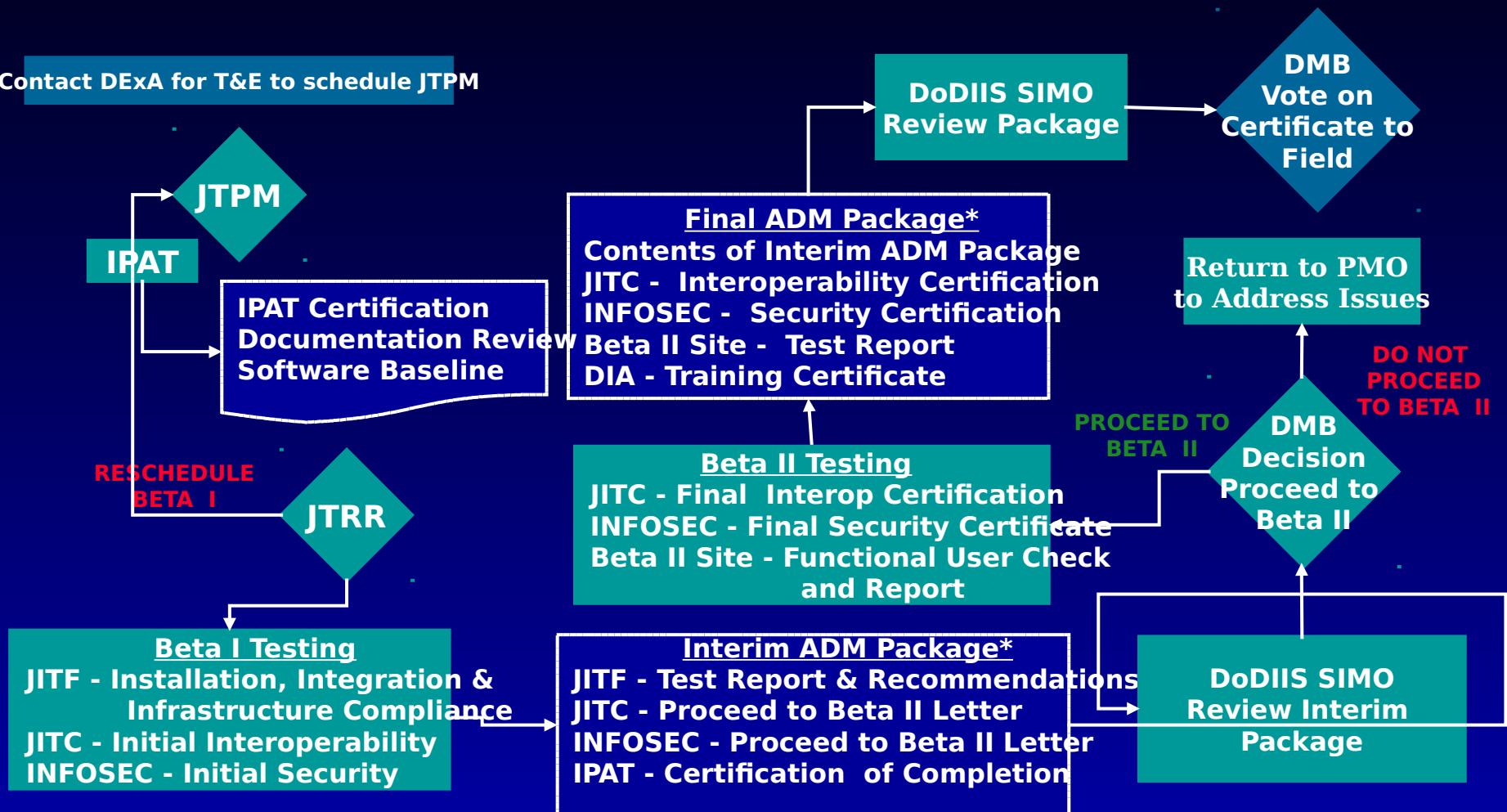




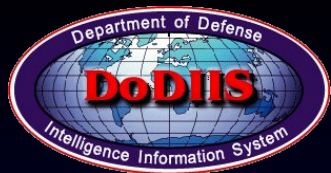
DoDIIS Test & Evaluation Process



Contact DExA for T&E to schedule JTPM



*See DoDIIS Instructions 2000, Appendix



DoDIIS T & E Process

Step 1: Joint Test Planning Meeting



Contact DExA for T&E to schedule JTPM

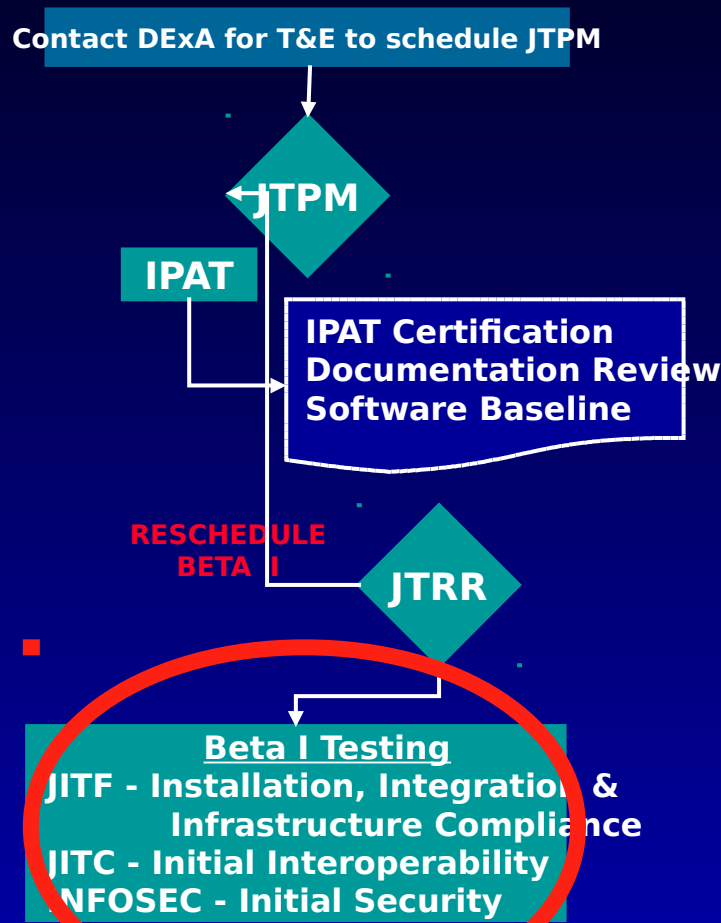
JTPM

DMB
Vote on
Certificate to
Field

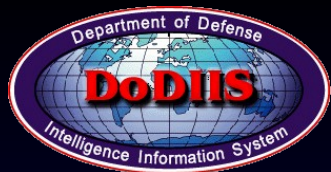


DoDIIS T & E Process

Step 2: Beta I Testing



DMB
Vote on
Certificate to
Field



DoDIIS T & E Process

Step 3: "Proceed to Beta II" Vote

Contact DExA for T&E to schedule JTPM

JTPM

IPAT

IPAT Certification
Documentation Review
Software Baseline

RESCHEDULE
BETA I

JTRR

Beta I Testing

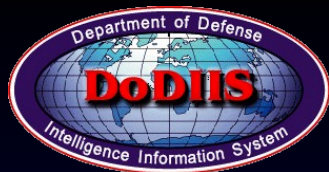
JITF - Installation, Integration &
Infrastructure Compliance
JITC - Initial Interoperability
INFOSEC - Initial Security

Interim ADM Package*

DoDIIS SIMO
Review Interim
Package

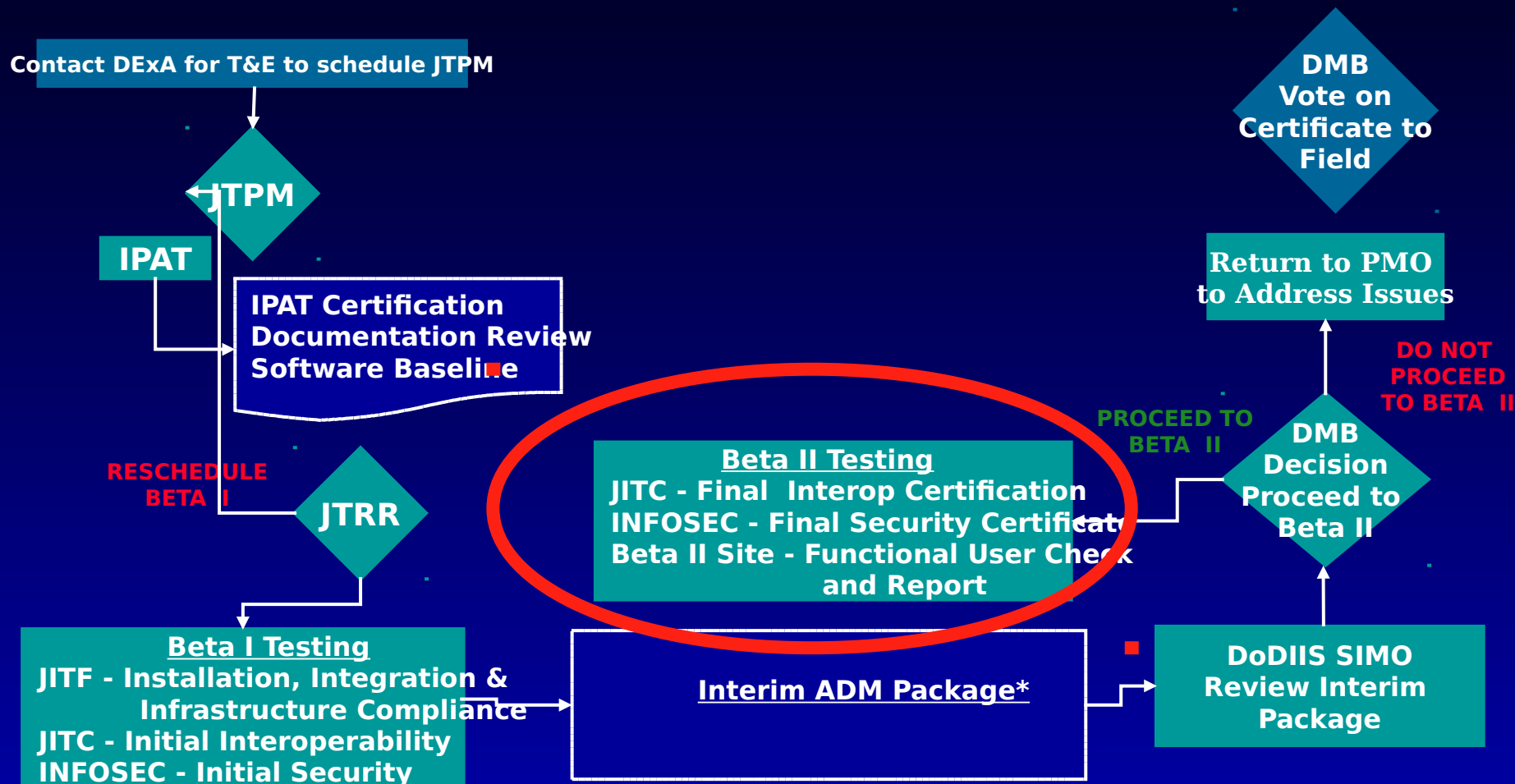
DMB
Decision
Proceed to
Beta II

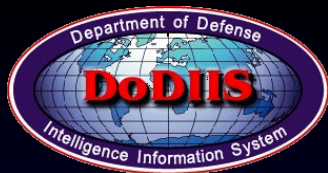
DMB
Vote on
Certificate to
Field



DoDIIS T & E Process

Step 4: Beta II Testing



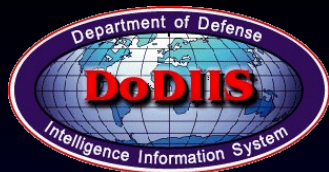


DoDIIS T & E Process

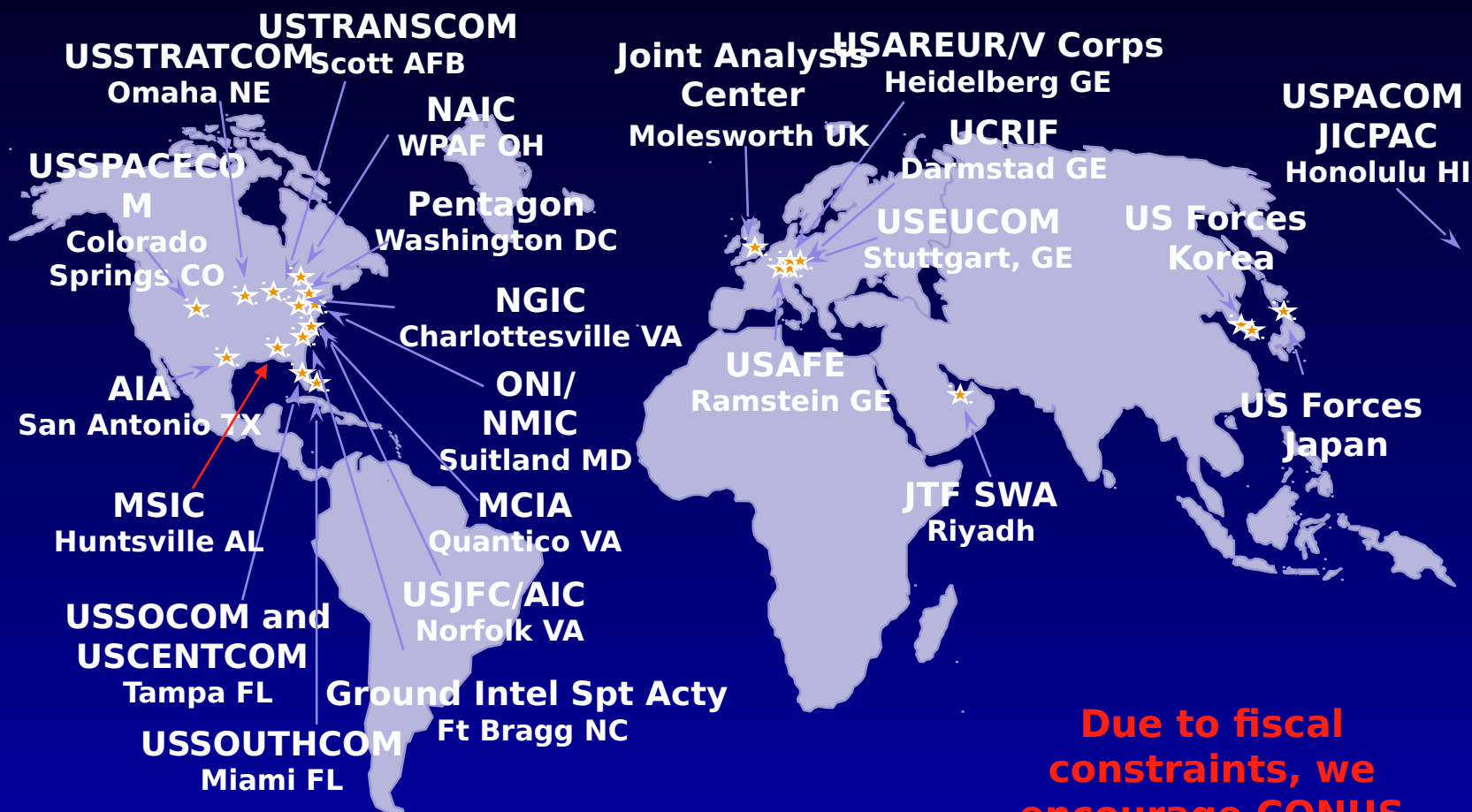
Step 4: Beta II Testing



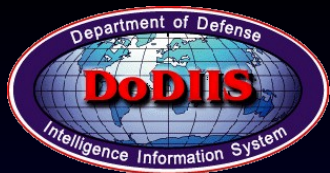
- **Principal Purpose:** To certify Intelligence Mission Application (IMA) interoperability and functionality with other IMAs in an **OPERATIONAL** environment
- This testing is conducted at the DoDIIS Site
- This phase includes:
 - Operational Site Acceptance Testing by a DoDIIS Site
 - Final Interoperability by the JITC
 - Final Security Certification by the appropriate Security Certifier



Potential Beta II Sites



Due to fiscal constraints, we encourage CONUS Beta II Sites.



Beta II Site Selection

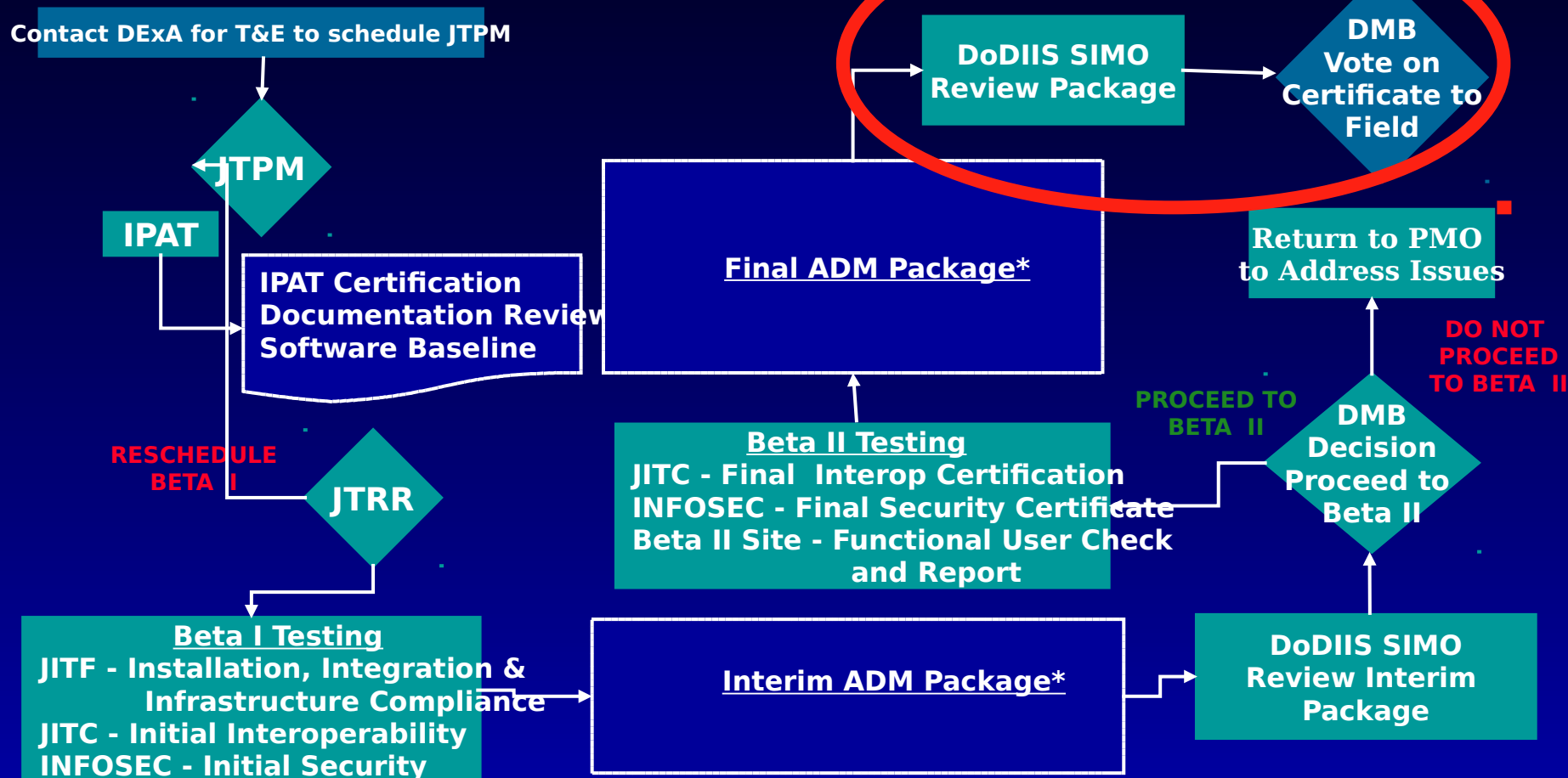


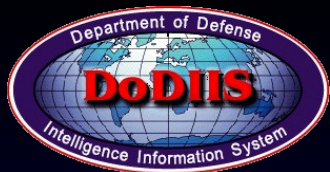
- **Selected by PM in coordination with DExA for T & E**
- **What goes into choosing BETA II Site(s)?**
 - **The best representation of the operations of the system within the user community**
- **Other considerations:**
 - **Volunteer and Availability of Facility and Personnel**
 - **Environment**
 - **Maximum # of Interfacing Systems and Supported Platforms**
 - **Participant in System Development Process**
 - **Active in Review and Update of Test Plans and Procedures**



DoDIIS T & E Process

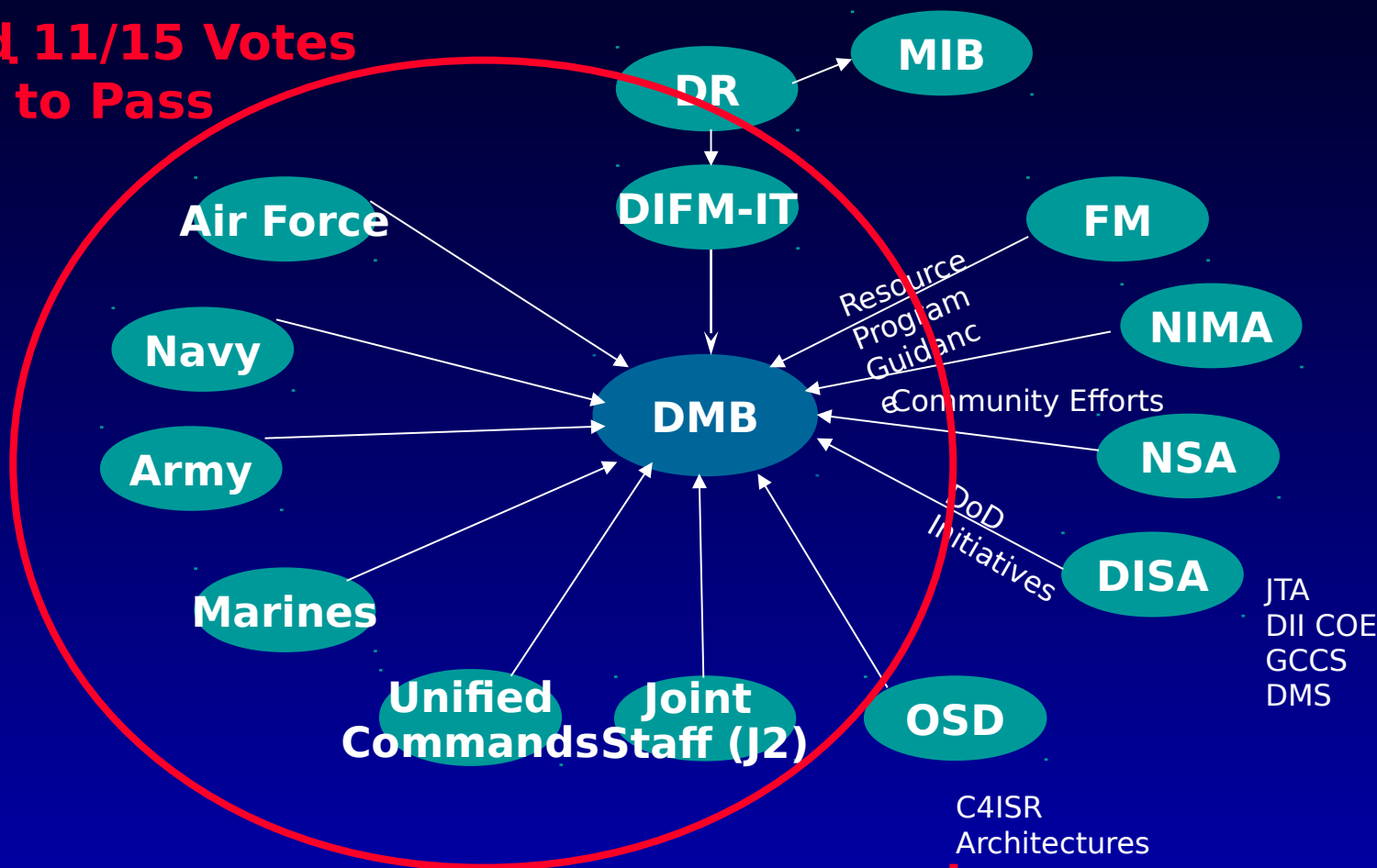
Step 5: "Certificate to Field" .Vote

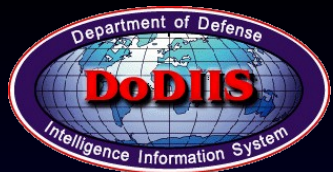




Votes for Certificate to Field

Need 11/15 Votes to Pass



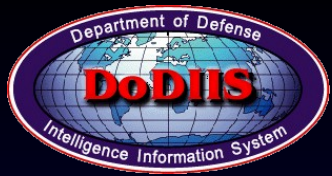


DoDIIS T & E Process

Step 6: Posting the Results



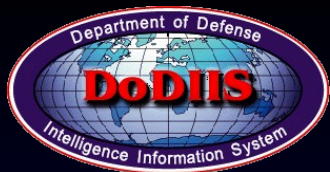
- **Test results are distributed to PMO, SIMO, DMB, and the DExA for T & E**
- **Reports are also posted in the Virtual Test Folder (VTF) on Intelink**
 - **VTF provides feedback mechanism for users and a historical record of testing results**
 - **Index available on internet**
 - **Intelink: <http://web1.rome.ic.gov/jitf/vtf.html>**
- **DMB vote results for Interim MS III (Proceed to Beta II) are distributed via e-mail and msg traffic**



How Often Do Programs Test?

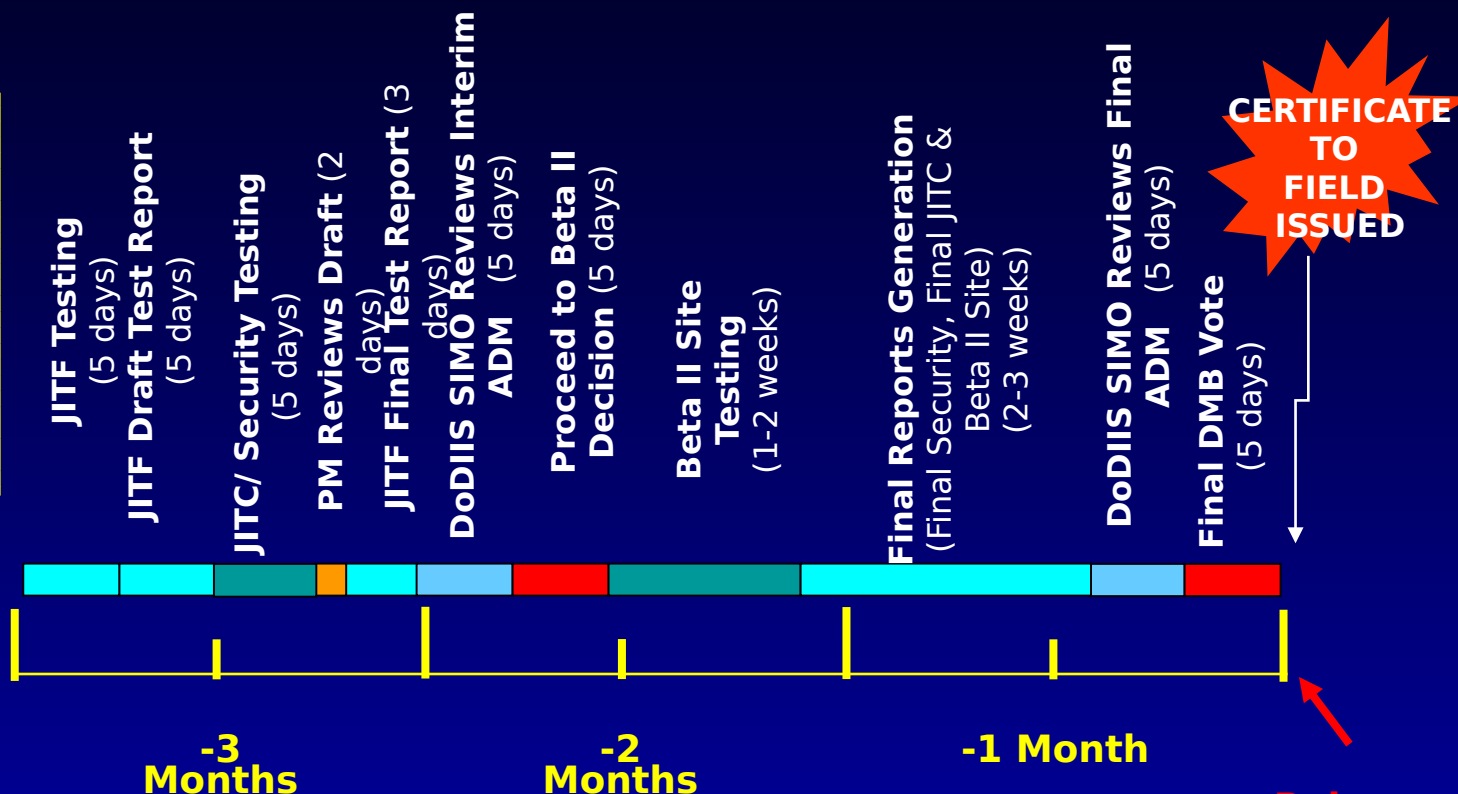


- **Dependent on frequency of program releases**
 - **Major releases: Expect to test**
 - **Minor releases: Expect at least a review to determine if testing (all or only some) is necessary**
 - **Maintenance releases: Most will only need a documentation review**
- **Major, Minor, or Maintenance categories are defined in the DII COE Integration and Runtime Specification (I&RTS), Version 4.0**



Testing Timeline

JTPM
at least
3
months
before
Beta I



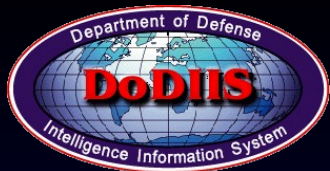
The Testing Process takes **approximately 3 months** to complete. **Date**
Plan ahead early so that you can release on time.



Testing Is Still Necessary!



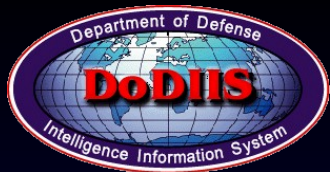
- **Mature programs have measurably improved**
 - **FY99: Programs met 73.16% of JITF requirements**
 - **FY00: Programs met 77.88% of JITF requirements**
 - **FY01: Programs met 78.65% of JITF requirements**
 - **FY02: Programs met 83.00% of JITF requirements**
- **Major changes are being made to many existing programs.**
(Ex: Changing to Web-based client/server and/or joining the JIVA Enterprise)
- **To mitigate risk to the Intelligence Community, continued vigilance is necessary.**



Funding & Resources



- **Historically:**
 - **Testing funds came from the Accelerated Interoperability (AI) line from each Service and Agency**
- **Current Situation:**
 - **No single central funding line established for testing in GDIP**
 - **Testing is dependant on Services and Agencies to voluntarily provide funds**
 - **Results in annual shortfalls and last minute scrambles to find funding**
- **Future Sources:**
 - **Current proposal of subsidized funding is working its way through DIA and AF.**

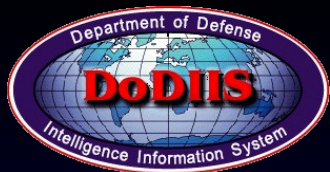


FY03/04 Funding Strategy



Current Funding Strategy:

- In the 1st quarter of the FY, each Service/Agency is to pay \$150K for each program (not each test) requiring DoDIIS test and certification activities, regardless of size or amount of effort needed for the activity
- The amount of funding was based on a forecast for fiscal year
- Funding is considered a 'premium' to cover all JITF and JITC test activities, to include reviews, testing services, and reporting, as well as the issuance of 'no-test' letters

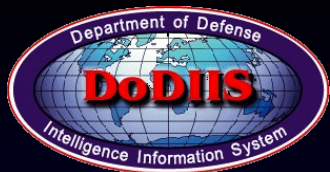


Optimal Funding Strategy



Target Funding Strategy:

- Centralized Funding for DoDIIS Testing
- Funding would come directly from the GDIP budget
- Comments:
 - Allows truly independent testing
 - Frees testers from constant worries about collecting funds annually from services/agencies individually
 - Services/Agencies would be freed from programming for testing and transferring funds during execution year
 - DoDIIS testers could justify their expenses directly with GDIP PM (similar to JWICS setup). PMGM states that through centralized funding "...the JWICS PMO will gain greater flexibility to better manage the JWICS network and related services."
 - Both the Unified Commands and Program Managers would be better served by the DoDIIS testing process if centrally funded.

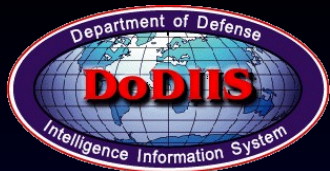


FY05 Proposed Funding Strategy



Proposed Funding Strategy:

- **Subsidize Testing and Programs Pay the Difference**
 - Pay basic expenses from DIA, AF, Army, Navy (\$4,088K)
 - Spread shortfall out over all tests and charge programs: (Example) $\$400\text{K} / 28 \text{ tests} = \14K per test
- **Comments:**
 - Different size programs require different levels of effort to test: i.e. ISSE Guard requires more effort than Coliseum—Coliseum PMO could reasonably argue they should pay less than \$14K per test
 - Option requires high level of accounting effort from already minimally-manned DExA & testing organizations
 - Funding (\$14K) may not be received by testing organizations when required to support contracting activities
 - Less PM testing sticker shock

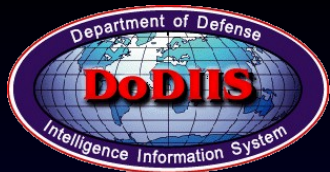


Funding Summary



- **Funding received from AF, DIA, Navy, independent program offices (6 in FY03*)**
- **\$150,000 per program per year**
- **Funding supports JITC, JITF, DExA test activities**
- **Future of T&E funding TBD**

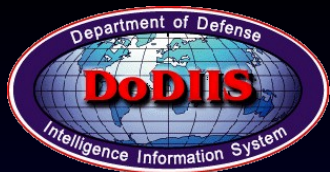
***Army, JIOC (2), DTRA, NSA, AF ACC/IN (Pentagon)**



ISSM Role



- **Acting as focal point for certification and accreditation actions with the Service Certifying Organization (SCO)**
- **Reviewing all SSAAs for systems within the site baseline, ensuring that site policies and procedures are reflected as appropriate and endorsing those found to be acceptable**



ISSO Role



- **Ensuring systems are operated, maintained and disposed of IAW internal security policies/practices outlined in the SSAA**
- **Formally notifying the ISSM (or SCO) when changes occur that might affect accreditation**
- **Following procedures developed by ISSM (or SCO) authorizing software, hardware and firmware use before implementation on the system**



AFSCO Systems Security Certifiers & Accreditors



**MSgt Melinda Morales, NCOIC, AFC2ISRC/INYA &
AFSCO DoDIIS Security Certification &
Accreditation**

MSgt Janet Schwanke, Systems Security Certifier

TSgt Daniel Spilde, Systems Security Certifier

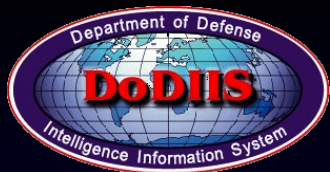
(210) 977- 6326 DSN: 969

**MSgt Cheryl Williams, Systems Certifier and
Accreditor**

**MSgt Rodney Brown, Systems Certifier and
Accreditor**

TSgt Robin Giles, Systems Certifier and Accreditor

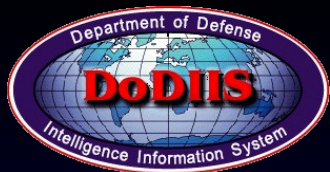
(210) 977-6626 DSN: 969



Want to Learn More?



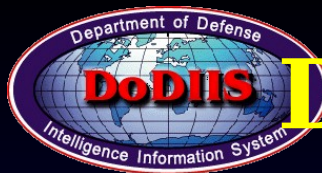
- **Attend the Test Process Oversight Committee (TPOC)**
 - **Provides forum for Test Agencies, PMOs, Software Development Community, & IMA users**
 - **Facilitates Community Feedback on Testing Issues**
 - **Informs Community of Changes to Policies**
- **Next TPOC:**
 - **Oct/Nov 2002**
 - **AFC2ISRC, Langley AFB, VA??**
 - **Contact our office for more information**
- **Hope to see you there!**



Want to Learn More?



- **Visit the Virtual Test Folder**
 - <http://web1.rome.ic.gov/vtf.cgi>
 - Read existing test reports/letters
- **Read the Guidance Documents**
 - DoDIIS Instructions 2000 & the DoDIIS T&E Policy
 - Joint Interoperability Test Command:
<http://jitc.fhu.disa.mil>
 - DoDIIS System Integration Management Office:
<http://dia.ic.gov/proj/dodiis/simo/simo.html>
 - JITF requirements:
<http://www.if.afrl.af.mil/tech/programs/jitf>
- **Contact our office for more information**



DExA for T&E Personnel



Captain Diane Martin, OIC, DoDIIS T&E

SSgt Andrea Brown, Test

Coordination and Life Cycle Management

TSgt Janice Demarais, NCOIC, DoDIIS T&E

**SSgt Ronald Malone, Test Coordination &
Document Control**

DoDIIS SIMO/LCM

Ms. Kara Byrd, (202) 231-4419 DSN: 428

Lt Col Rich Miller, (202) 231-8714 DSN: 428



Contact for DExA for T&E



- **DExA for Test and Evaluation**

Captain Diane Martin, AFC2ISRC / INYX
tele: (757) 225-2910, DSN 575-2910

Email: dexa.te@langley.af.mil

- **Subscribe to the Virtual Test Folder (VTF) at:**

<http://web1.rome.ic.gov/vtf.cgi>

- **Documentation on JITF Home Page:**

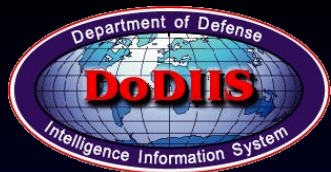
<http://www.rl.af.mil/jitf>



T&E Cost Breakdown



Equipment	\$7,764
Configuration Management	\$3,694
Software Licenses	\$1,206
JITF Contractor Support	\$95, 945
JITF Training Support	\$1,771
JITC Contractor Support	\$33,168
DExA Contractor Support	\$6,257
Government Travel	\$595
Total Cost per Program:	\$150,400



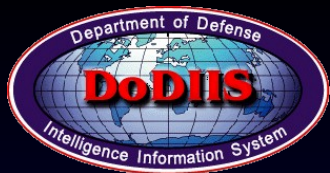
Tests by Agency



	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03 (proj)
AF	2	7	3	8	12	16	12	8	9 (1)
DIA	3	3	3	7	6	8	11	11	13 (8)
ARMY	1		4	2	2	1	3	0	0
NAVY	1			1	2	2	1	2	3 (3)
NIMA	1	4	4	12	15	8	4	0	0
NSA								1	1
DTRA								1	1
Other									6
TOTAL	8	14	14	30	37	35	31	23	33

• **FY03 numbers in parentheses reflect completed Intelligence Mission Application (IMA) tests**

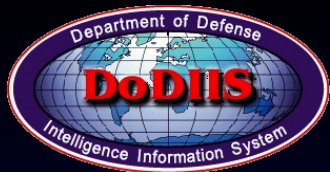
• **Does not include reviews of software releases that resulted in no-test letters**



What kind of testing?



- **Installation** - Can the IMA be installed by the site user given the documentation?
- **Integration** - Does the IMA work correctly with all the proper operating systems and DoDIIS infrastructure software?
- **Integration** - Does the IMA peacefully co-exist with the other IMAs on the system?
- **Interoperability** - Does the IMA pass and receive data precisely and accurately with other IMAs?
- **Security** - Is the IMA configured in accordance with Defense Intelligence Community Directive requirements?
- **Site Acceptance Testing** - Can the IMA be installed and operated in a real world environment?

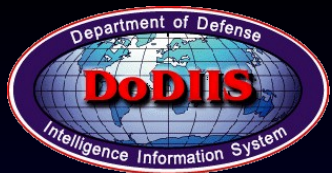


Beta I Testing



Testing Conducted:

- **Integration (JITF)**
 - **Installation, integration and infrastructure compliance**
 - **Issues Test Report with recommendation to Proceed to Beta II**
- **Interoperability (JITC)**
 - **Initial interoperability assessment**
 - **Issues recommendation to Proceed to Beta II**
- **Initial Information Security**
 - **Initial IT component review**
 - **Issues a recommendation to Proceed to Beta II**
- **Training**

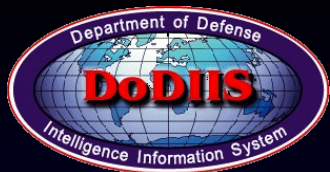


Beta II Testing



Testing Conducted:

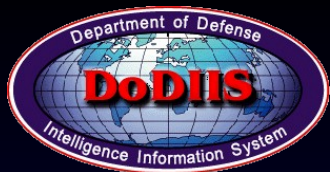
- **Operational Site Acceptance Testing**
 - **Site conducts testing with operational scenario**
 - **Sends Beta II test report (message format) to PMO, DoDIIS SIMO, and DExA for T&E**
- **Interoperability (JITC)**
 - **Final IT component review**
 - **Performs tests, publishes test report, issues interoperability certification**
- **Information Security**
 - **Final assessment and security certification**
 - **DIA gives accreditation upon review of certification**



Integration



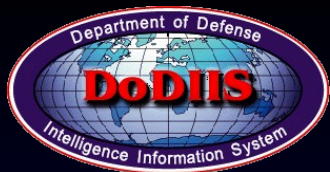
- **Purpose**
 - **Verify installation procedures and infrastructure compliance, identify computer and network resource conflicts and the operational impact of a common environment.**
- **Test Agency**
 - **Joint Integration Test Facility (JITF), Rome NY**
 - **NIMA Integration Test Facility (ITF), Newington VA**
 - **Chartered by DMB to verify IT components meet DoDIIS requirements and function within existing infrastructures and resources**



Interoperability



- **Purpose**
 - **Demonstrate satisfactory and direct exchange of data between two or more IT components**
 - **no loss of precision**
 - **format understood by involved IT components**
 - **Conduct NITF and USMTF standards conformance certifications where needed**
- **Test Agency**
 - **DISA's Joint Interoperability Test Command (JITC), Indian Head MD**
 - **Chartered by JCS to issue interoperability certification for IT components**

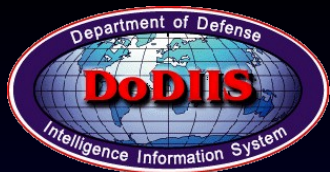


Security



- **Purpose**
 - **Comprehensively evaluate the technical & non-technical security features of an IMA and other safeguards to establish the extent to which the IMA meets the specified set of security requirements**
- **Test Agency**
 - **Appropriate Security Certifying Organization (SCO)**
 - **Assigned by DIA with the responsibility to certify most projects (except multi-level, Protection Level 4 systems)**
 - **Uses DoDIIS Security Certification and Accreditation Guide (April 2001)**
 - **Accreditation authority remains with DIA**

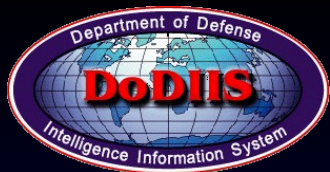
Note: JITF security (INTSEC) test procedures are not related to Security Certification.



Training



- **Purpose**
 - **Ensure that performance-based training materials have been developed and are in an appropriate and effective format for learning concurrent with the delivery of the IMA for end users**
 - **PM should create or build upon existing Training Management Plan and training materials (CBTs, videos, books and manuals).**
- **Test Agency**
 - **General Intelligence Training Council (GITC) at Defense Intelligence Agency, Washington DC**

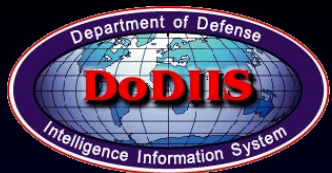


Site Acceptance



- **Purpose**
 - **Certify IT component interoperability and functionality with other IT components in an OPERATIONAL environment by an operational user**
- **PMO identifies Beta II test site**
 - **An operational DoDIIS site at which IT component will be installed**
 - **Use Beta II test site criteria when choosing the site**
 - **Beta II site develops operational scenario and writes a test report (in message format)**

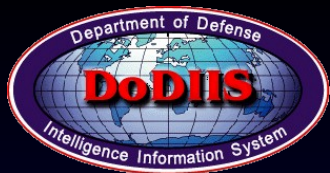
See Test and Evaluation Policy, Appendix G, for additional guidance



Virtual Test Folder (VTF)



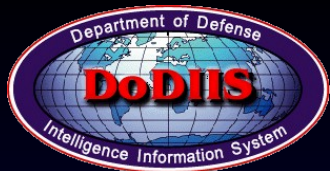
- **Test results are distributed to PMO, ERB, SIMO, DMB, and the DExA for T&E**
- **Reports are also posted in the Virtual Test Folder (VTF) on Intelink**
 - **VTF provides feedback mechanism for users and a historical record of testing results**
 - **Index available on Internet**
 - **Intelink:**
<http://web1.rome.ic.gov/jitf/vtf.html>
- **Comments on the VTF are welcome**



Test Process Oversight Committee



- **Objectives:**
 - **Provide a Forum for Test Agencies, PMOs, Software Development Community, and IMA users**
 - **Facilitate Community Feedback on Testing Issues**
 - **Inform Community of Changes to Policies**
- **Next TPOC:**
 - **November 2003**
 - **Langley AFB area**
 - **Contact DExA office for more information**
- **Hope to see you there!!!**



TPOC Goals

- **Provide a Forum for Test Agencies, PMOs, Software Development Community, and IMA users**
- **Facilitate Community Feedback on Testing Issues**
- **Inform Community of Changes to T&E Policies**
- **Ensure all parties have a clear understanding of the certification process and the roles of the test organizations**